CLAIMS

1. A lock system comprising:

a lock core comprising a core body, a lock actuator coupled to the core body for rotation about an axis, a blocker movable perpendicular to the axis, and an electromagnetic actuator, the blocker having a long dimension that is perpendicular to the axis, the electromagnetic actuator having a shaft that is movable parallel with the axis between a first position in which the blocker is locked to prevent rotation of the lock actuator about the axis and a second position in which the blocker is unlocked to allow rotation of the lock actuator about the axis, the blocker being in a locking position when the blocker prevents rotation of the lock actuator about the axis, the lock core further having a blocker spring that engages the blocker and biases the blocker toward the locking position; and

a token that is couplable mechanically to the lock actuator, the electromagnetic actuator moving the shaft parallel with the axis from the first position to the second position so that the blocker is unlocked after the token is coupled mechanically to the lock actuator.

2. The lock system of claim 1, wherein the lock core includes a shaft spring that biases the shaft toward the first position.

3. The lock system of claim 2, wherein the spring is a coil spring that extends parallel with the axis.

4. The lock system of claim 1, wherein the token has a power source that provides power to the electromagnetic actuator when the token is coupled mechanically to the lock actuator.

5. The lock system of claim 4, wherein the lock actuator has a passage that receives a first portion of the token when the token is mechanically coupled to the lock actuator and the power source is carried by a second portion of the token that is situated outside the passage when the token is coupled mechanically to the lock actuator.

6. The lock system of claim 1, wherein the token is moved manually about the axis to move the lock actuator about the axis when the token is coupled mechanically to the lock actuator and the shaft is moved to the second position.

7. The lock system of claim 6, wherein the lock actuator has an initial position in which the token is mechanically couplable to and decouplable from the lock actuator and the lock core further comprises at least one tumbler element that prevents decoupling of the token from the lock actuator when the lock actuator is moved away from the initial position by the token.

8. The lock system of claim 1, wherein the blocker spring is a coil spring that extends perpendicular to the axis.

9. The lock system of claim 1, wherein when the blocker moves away from the locking position, a portion of the blocker prevents movement of the shaft to the first position.

10. The lock system of claim 9, wherein the electromagnetic actuator has a shaft spring that biases the shaft toward the first position so that when the blocker returns to the locking position, the shaft moves to the first position.

11. The lock system of claim 1, further comprising a lock cylinder, the lock core being couplable to and decouplable from the lock cylinder, the lock core further comprising a tumbler element that is movable between a coupling position in which the lock core is prevented from being decoupled from the lock cylinder and a decoupling position in which the lock core is decouplable from the lock cylinder, the tumbler element remaining in the coupling position when the token is coupled mechanically to the lock actuator, and a second token that is couplable mechanically to the lock actuator, the electromagnetic actuator moving the shaft parallel with the axis from the first position to the second position so that the blocker is unlocked and the tumbler element moving from the coupling position to the decoupling position when the second token is coupled mechanically to the lock actuator.

12. The lock system of claim 11, wherein the lock core comprises a sleeve coupled to the lock actuator, the lock core comprises a lug coupled to the sleeve, and the sleeve and the lug are rotatable with the lock actuator about the axis when the tumbler element is in the decoupling position to move the lug between an engaged position in which the lug engages the lock cylinder to prevent removal of the core body from the lock cylinder and a disengaged position in which the lug is disengaged from the lock cylinder to allow removal of the core body from the lock cylinder.

13. The lock system of claim 1, wherein the lock core has an electric circuit in communication with the electromagnetic actuator, the electric circuit has a clock, and the electric circuit stores data regarding a date and a time that the token is coupled mechanically to the lock actuator.

14. The lock system of claim 1, wherein the token has an electric circuit, the electric circuit includes a clock, and the electric circuit stores data regarding a date and a time that the token is coupled mechanically to the lock actuator.

15. The lock system of claim 1, wherein the token comprises a power source and an electric circuit coupled to the power source, the electric circuit being configured to store token identification information, and the electric circuit being configured to store usage data regarding use of the token with the lock core.

16. The lock system of claim 15, wherein the usage data comprises at least one date and at least one time at which the token was coupled to the lock actuator.

17. The lock system of claim 1, wherein one of the token and the lock core has an electric circuit including a clock and the shaft of the electromagnetic actuator is movable between the first position and the second position only when the token is coupled mechanically to the lock actuator during a selected time period.

18. The lock system of claim 1, wherein the token has a first electric circuit, the lock core has a second electric circuit that communicates history data to the first electric circuit when the token is coupled mechanically to the lock actuator, and the history data includes data related to the use of at least one other token that has been coupled mechanically to the lock actuator in the past.

19. The lock system of claim 1, wherein the token couples mechanically to the lock actuator along a path that is parallel with the axis.

20. The lock system of claim 1, wherein the lock core is sized and configured for receipt in a space of a lock cylinder once occupied by a traditional, non-electronic lock core.